turous enough to face a world seething with fresh impulses, confident in the determination of the empiricist to test all things and hold fast to that which is good.

LANCELOT HOGBEN.

BIRTH CONTROL

Sanger, Margaret. *My Fight for Birth Control.* London, 1932. Faber & Faber. Pp. 338. Price 15s.

THE majority of those in sympathy with the birth-control movement would certainly enjoy this book. Every chapter of it, from the preliminary one about the author's parentage and childhood onwards, is interesting and enlightening. The term birth control was the invention of Mrs. Margaret Sanger, and her seventeen years of fight for this cause has been against the laws in the United States of America which prohibit the practical information, and against the incessant, underground, and sometimes illegal obstruction of priests to her reforming efforts. It was as a hospital nurse that there was burned into her the terrible sufferings which women of the poorest classes endured from unending pregnancies, hungry and sickly children, and dangerous abortions, fundamentally due to these laws. This experience led her to begin the fight, notwithstanding her serious tuberculosis, and her account of it is a dramatic revelation of wisdom, courage, overwork, ability, and charm.

An indictment, an escape to Europe for discussions with the leading birth controllers there, and a return to undergo several trials and one brief imprisonment, brought her into great prominence. She then became able to build up an American league with strong academic backing, to make a stirring tour in China and Japan, and to organize, among other great meetings, the World Population Conference at Geneva, which many readers of the EUGENICS REVIEW attended and will ever look back upon with pleasure and gratitude. This book will surely complete Mrs. Sanger's opening of American eyes to the humanitarian and economic need for birth control, and to the shameful extent to which the priests can interfere with liberty and legal rights. One big victory already to her credit is the decision in 1918 of the Court of Appeals of the State of New York that the law did not prevent physicians giving instruction in the technique of contraception " for the cure or prevention of disease."

Some of Mrs. Sanger's remarks on China —such as, " China, the ancient well-spring of art, philosophy, and the deepest wisdom of the world, has been brought down to the lowest conceivable level by the brutal, bestial and squalid breeding of the worst elements "—imply that race deterioration has been in progress there. But Miss Agnes Smedley, an American who has lived and travelled much in China, has recently said that even the Chinese women of the upper, middle, and lower-middle classes suffer from constant fear of pregnancy, physical exhaustion due to too frequent pregnancy or childbirth, and abortions produced by old Chinese medicines. So a eugenist may argue that, as all the classes have a high birth rate, there cannot be race deterioration—" a multiplication of degeneracy "—although Mrs. Sanger saw " starving, naked children, some of them blind, all blemished and malformed." Are not the Chinese a remarkably tough, able, and adaptable people? Better for a race is a very high death rate than a badly controlled birth rate.

We hope that Mrs. Sanger is justified in the big claim that there is no reversed selection in Holland owing to the facilities which its Neo-Malthusian League's system of advertising its trained nurses in many towns has given to the poorest classes. Otherwise her book leaves the pessimist in his belief that, wherever contraception is spreading, the only hope for eugenics is to make abortion and voluntary sterilization freely available to these sections. Mrs. Sanger has made only one bad mistake—although one or two Britons whose names have been distorted may consider this an under-estimate—and that is in attributing England's various birth rate inquiry committees to the Royal Geographical Society instead of to the

National Council of Public Morals. She might also have referred to the pioneering work in her own country of Dr. William J. Robinson and some others. But the great thing is that this, her latest book, is a thrilling one and will be read and talked of in many countries, and that it may rouse Americans to action which would benefit the whole world.

B. DUNLOP.

EMBRYOLOGY

Needham, Joseph. *Chemical Embryology.* Cambridge, 1931. The University Press. 3 vols. Pp. xliv+2021. Price five guineas.

THIS work has been planned and carried out on a magnificent scale. The mere fact that the bibliography comprises more than 7,000 titles indicates the enormous amount of labour which has been expended on it. The achievement becomes all the more remarkable, and the book all the more valuable, when one remembers that there are practically no previous works covering the same field. Moreover, the author has not given us a " mere " compilation. He has critically reviewed the data, placed them in reference to one another, and, from the mass of disconnected material lying scattered throughout the literature, he has built a very imposing edifice, the temple of a new branch of science, chemical embryology.

The foundations are securely laid. It has become usual, since Driesch's day, for experimental embryologists, perhaps more than any other scientists except physicists, to be interested in the philosophical foundations of their science. Dr. Needham is no exception to the rule. He leads off with an introduction of about 25 pages on the theory of chemical embryology, in which most of the previous philosophical theories are reviewed, and his own brand of neo-mechanism is developed. The discussion is interesting and valuable, but suffers somewhat from having been written before the appearance of Woodger's important work on *Biological Principles*.

There follows a full historical account of the development of embryology in general from antiquity to the beginning of the nineteenth century. This takes 180 pages, and adds considerably to the dignity and scholarliness of the work as a whole; but the gap between the stage at which the historical treatment leaves off, owing to the mass of material at its disposal, and the stage at which the later chapters take up the individual problems again for detailed discussion, is so large that the connection between the two types of treatment is lost. One would welcome even an outline of the historical development during the nineteenth century. The whole section, particularly if it were amplified in this way, would make an extremely attractive book if published separately, and might then attract more of the interest from general readers which it richly deserves.

Part III is entitled General Chemical Embryology, and Section 1 of it deals with the unfertilized egg as a physico-chemical system. The next section, on increase in size and weight, is of more general interest, since it summarizes most of the recent work on the subject of growth. The discussion brings out very well the confused and unsatisfactory state in which the subject at present rests.

Section 3 deals with the increase of complexity and organization, and touches on the border-line between chemical embryology and the more usual experimental embryology and genetics. Written within the limits of sixty pages, the exposition is adequate but somewhat cursory. In connection with the "organizer" phenomena, more might have been made of the recent suggestive work on self-differentiation, which perhaps gives a hope of a successful chemical approach in the not-too-distant future. But in general Dr. Needham's method of approach and his attempt to introduce quantitative concepts into this difficult field are very stimulating and may lead to important developments.

These more general chapters fill the whole of the first volume. The second and third volumes contain sections on the various